

MOSKALENKO, A.I. (Voronezh); SUKHAREVA, O.T. (Voronezh)

Use of the "ShChOM-D" ballast cleaner in the divisions. Put'  
i put.khoz. 7 no.9:16-18 '63. (MIRA 16:10)

GORODETSKIY, Yu.B., inzh.; SUKHAREVA, R.A., red.; KAMYSHNIKOVA, A.A.,  
tekhn. red.

[Collection of inventions: construction and building materials  
in agriculture]Sbornik izobretenii; stroitel'stvo i stroitel'-  
nye materialy v sel'skom khoziaistve. Moskva, TSentr.buro  
tekhn. informatsii, 1962. 47 p. (MIRA 16:3)

1. Russia (1923- U.S.S.R.)Komitet po delam izobreteniy i ot-  
krytiy.

(Building--Technological innovations)

(Building materials industry--Equipment and supplies)

(Agricultural engineering--Equipment and supplies)

KHESIN, VIKTOR I. I. KUZHAREVA, R.A., red.

Flight II and landing devices for airplanes; survey of  
foreign patents. Vozmozhnye gosudarstvennye ustroistva dlia sa-  
moletov i napravleniye izobretenii. Moskva, TSentr.  
nauchno-issled. i inzhener. informatsii i tekhniko-ekon.  
issled. 1969. 15 p. (MIRA 18:5)

ARTAMONOV, O.F., inzh.; KAZAKEVICH, V.Ye., inzh.; LINKOV, Ya.L.,  
inzh.; SUKHAREVA, R.A., red.; KAMYSHNIKOVA, A.A., tekhn.red.

[Collection of Russian and foreign patents; semiconductors  
and their applications] Sbornik otechestvennykh i zarubezh-  
nykh izobretenii; poluprovodniki i ikh primeneniye. Moskva,  
1963. 77 p. (MIRA 16:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut patentnoy  
informatsii i tekhniko-ekonomicheskikh issledovaniy.  
(Semiconductors--Patents) (Transistors--Patents)

SUKHAREVA, R.A.; red.

[Index of inventions published in the U.S.S.R. (from 1896 to June 1963)] Ukazatel' izobretenii, opublikovannykh v SSSR (1896-iiun' 1963 gg.) Moskva, TSentr. nauchno-issl. inst patentnoi informatsii i tekhniko-ekon. iss'. Klass 45. 1964. 434 p. (MIRA 18:7)

1. Moscow. Vsesoyuznaya patentno-tekhnicheskaya biblioteka.

POTUTKIN, G.F.; SUICHANAVA, B.A.

Controlled drying of small wood waste. Ber. prom. 14 no.12:  
27 D '65. (MIRA 18:12)

USSR/Pharmacology and Toxicology - Analeptics.

v-4

Abs Jour : Red Zhur - Biol., No 21, 1958, 98481

Author : Dukharova, R.I., Shashkova, L.I., Kolesnichenko, Zh.N.

Inst : Moscow Medico-Stomatologic Institute.

Title : Reactivity of the Organism in Experimental Aminopterin  
Periodontosis.

Orig Pub : Nauchn. raboty stud. Mosk. med. stomatol. in-ta, 1957, vyp  
2, ch. 1, 26-29.

Abstract : In control experiments, strychnine (in a dosage of 0.2-0.4  
mg per rat) induced convulsions in all animals taken for  
the experiment. After introduction of aminopterin to  
animals, the convulsions under influence of strychnine were  
observed in those cases when strychnine was applied in lar-  
ge doses (15 mg) or when aminopterin was introduced during  
a short period in small doses.

Card 1/1

SKVARCHENKO, V.R.; SUKHASINA, T.S.; LEVINA, V.Ya.

Aromatic hydrocarbons. Part 29: Stereoisomeric tetrahydropthalic acids and their anhydrides in the reaction with phosphorus pentoxide. Zhur. ob. khim. 34 no. 3:752-760 Mr '64. (MIRA 17:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.



DEMUSENKO, Panteleymon Martynovich, kandidat sel'skokhozyaystvennykh nauk;  
SUKHAREVA, Tamara Timofeyevna, kandidat sel'skokhozyaystvennykh nauk;  
KAZAKOVA, Ye.D., redaktor; ZUBRILINA, Z.P., tekhnicheskii redaktor

[Work practice of vegetable growers at the all-Union Agricultural  
Exhibition] Iz opyta raboty ovoshchevodov - uchastnikov Vsesoiuznoi  
Sel'skokhoziaistvennoy Vystavki. Moskva, Gos. izd-vo selkhoz. lit-  
ry, 1956. 71 p. (MLRA 9:11)  
(Vegetable gardening)

SUKHAREVA, V. (Moskva)

Our successes and failures. Radio no.3:19 Mr '56. (MLRA 9:6)

1.Kapitan komandy radiostantsii UA3KBD.  
(Radio, Shortwave--Competitions)

SUKHAREVA, V. D.

Mar 1948

USSR/Petroleum  
Geology

"Perspectives of Petroleum Capacity of the Lower Permian Deposits of Kuybyshev Zavolzh'ye,"  
L. N. Rozanov, V. D. Sukhareva, 6½ pp

"Neftyanoye Khozyaystvo" No 3

Presents author's analysis showing that study of structure of lower Permian deposits can be solved, by method of correlation of diagrams of core samples, taken by electrical means, in conjunction with geological materials. Mentions conflicting opinions on geological structure of lower Permian deposits of Kuybyshev Zavolzh'ye, and important area since industrial flows of light oil obtained there in 1945-46

PA 61796

AVERKO-ANTONOVICH, I.N.; SUKHAREVA, V.I.

Solubility of  $\text{Li}_2\text{CO}_3$  in solutions of  $\text{LiCl}$  at  $0 - 100^\circ\text{C}$ . Zhur.-  
neorg.khim. 7 no.6:1478-1479 Je '62. (MIRA 15:6)

1. Kazanskiy gosudarstvennyy universitet, kafedra neorganicheskoy  
khimii.

(Lithium compounds) (Solubility)

SUKHACHEVA, V. N.

"Effect of the Cation Content of the Nutrient Medium on the Utilization of Cations by Plants." CandAgr Sci, Soil Inst izeni V. V. Dokuchayev, Acad Sci USSR, Moscow, 1954. (KL, No 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)  
SO: Sum. No. 598, 29 Jul 55

SUKHAREVA, Ye.

Trade-mark on metal. Izobr.i rats. no.2:37 F '62. (MIRA 15:3)  
(Trade-marks)

SUKHAREV, I. P.; SUKHAREVA, YE. M.

Voronezh Province - Irrigation

Findings on irrigation in Voronezh Province.  
Gidr. i mel. 4, No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952~~1953~~, Uncl.

SUKHAREV, I.P.; SUKHAREVA, Ye.M.

Effect of cultivation practices on soil water absorption [with summary in English]. Pochvovedenie no.3:95-104 Mr '58. (MIRA 11:4)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva tsentral'no-  
chernozemnoy polosy im. V.V. Dokuchayeva.  
(Soil absorption) (Tillage)



SUKHAREVA, Z. E.

16

\*284. New GIFTI Photo-Colorimeter. (In Russian.) P. A. Ivanov and Z. E. Sukhareva. *Factory Laboratory (U.S.S.R.)*, v. 13, Aug. 1947, p. 964-969.  
Describes a new instrument developed by the  
Gorki Physical-Technical Research Institute. In-  
cludes details of circuits and of the selenium  
photocell used.

METALLURGICAL LITERATURE CLASSIFICATION

531.37.01C

531.37.01C GIV 151

SUKHAREVA, Z. E.

22970 Fotonefelometry sistemy gifti. Zavodskaya laboratoriya, 1949, No.7,  
C. 866-67

SO: LETOPIS' NO. 31, 1949

CHAYLAKHYAN, M.K.; TURETSKAYA, R.Kh.; NEKRASOVA, T.V.; KEFELI, V.I.;  
SUKHAREVA, Z.I.

Period of dormancy and change in the content of physiologically  
active substances in peach seedlings. Dokl. AN Arm. SSR 40  
no.4:243-247 '65. (MIRA 18:6)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR.
  2. Chlen-korrespondent AN Armyanskoy SSR (for Chaylakhyan).
- Submitted September 15, 1964.

GRAND ... ..

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SUKHAREVA-NEMAKOVA, N.N.

Use of hemin and hemoglobin in media for the cultivation of  
Trypanosoma cruzi. Vest. Mosk. un. Ser. 6: Biol., pochv. 18  
no.5:25-34 S-O '63. (MIRA 16:10)

1. Kafedra mikrobiologii Moskovskogo universiteta.

SUKHAREVICH, P. M.

USSR/ Geology - Magmatic deposits

Card : 1/1

Authors : Chumakov, A. A., Sukharevich, P. M. and Sayanov, V. S.

Title : New data on magmatic developments in the southern part of the Dnieper-Prut water-divide plateau.

Periodical : Dokl. AN SSSR, 97, Ed. 3, 515 - 518, July 21, 1954

Abstract : New stratigraphic data are presented of the development of magmatic deposits in the southern part of the Dnieper-Prut watershed plateau of the USSR. Table.

Institution : ...

Presented by : Academician, N. S. Shatskiy, April 26, 1954

*SUKHAREVICH, P.M.*

USSR/ Geology

Card 1/1 Pub. 22 - 35/46

Authors : Sukharevich, P. M.

Title : About the stratigraphic position of arkose sandstones in the south-western incline of the Russian platforms

Periodical : Dok. AN SSSR 103/1, 129-131, Jul 1, 1955

Abstract : Geological-stratigraphic data are given on the orientation of arkose sandstones at the south-western dip of the Russian platform. Eleven references: 9 USSR, 1 Rum. and 1 Pol. (1906-1952).

Institution : Kishinev State University

Presented by : Academician N. M. Strakhov, March 10, 1955

SUKHAREVICH, P.M.

Stratigraphy and lithology of Jurassic deposits in the southwestern Black Sea Lowland. Izv.AN SSSR Ser. 21 no.3:72-80 Mr '56.

(MIRA 9:7)

1.Ministerstvo neftyanoy promyshlennosti SSSR Trest "Soyuzneftegaz-razvedka" 1 Moldavskaya ekspeditsiya Soyuznoy geologo-poiskovoy kontory, Kishinev.

(Black Sea Lowland--Geology, Stratigraphic)



CHUMAKOV, A.A.; SUKHAREVICH, P.M.

Tectonic-magmatic phenomena observed in the southern part of the  
Dniester-Prut Watershed Plateau. Dokl.AN SSSR 108 no.3:538-540  
My '56. (MLRA 9:8)

1. Kishinevskiy gosudarstvennyy universitet. Predstavleno  
akademikom N.S. Shatskim.  
(Dniester Valley--Geology, Structural)(Prut Valley--Geology,  
Structural)

SUKHAREVICH, P.M.; DANILOV, B.I.

Stratigraphic appurtenance of the Solikamsk horizon. Dokl. AN SSSR  
158 no.4:853-855 O '64. (MIRA 17:11)

1. Kamskiy filial Vsesoyuznogo nauchno-issledovatel'skogo geologo-  
razvedochnogo neftyanogo instituta. Predstavleno akademikom A.L.  
Yanshinym.

51127

S/056/62/C43/004/010/061

B102/B180

AUTHORS: Burov, V. A., Krasil'nikov, V. A., Sukharevskaya, O. Yu,

TITLE: Ultrasonic splitting of a Mössbauer absorption line in tin oxide  $\text{Sn}^{119}\text{O}_2$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 4(10), 1962, 1184 - 1185

TEXT: Experiments, similar to those of Ruby and Bolef (Phys. Rev. Lett., 5, 5, 1960) with  $\text{Fe}^{57}$ , were carried out with the 23.3-keV gamma radiation of the  $\text{Sn}^{119}$  atoms in  $\text{SnO}_2$ . The  $\text{Sn}^{119\text{m}}$  source was deposited on aluminum foil. 25 and 35  $\text{mg}/\text{cm}^2$  thick layers of natural  $\text{SnO}_2$  deposited on quartz  $\lambda$ -cuts ( $16 \times 18 \text{ mm}^2$ , natural frequency 20 Mc) were absorbers with a distance of 7 cm between source and absorber was a palladium filter to attenuate parasitic 26-keV X rays. The gamma radiation was recorded by a photomultiplier with NaI(Tl) crystal the pulses of which passed via a pulse-height analyzer to a PC-10000 (PS-10000) scaling circuit. The quartz plate with the absorber was electrically excited with 18.5 Mc/sec. This non-resonance

Card 1/2

SUKHAREVSKII, B.

SUKHAREVSKII, B. Sovetskaia ekonomika v Velikoi Otechestvennoi voine. Moskva, Gosplanizdat,  
1945. 38 p. CSt-H NN DLC: HC335.S795

SO: LC, Soviet Geography, Part I, 1951, Uncl.

SUKHAREVSKIY, B.

Editorial: Some aspects of wages at the new stage of the progress of communism. Sots.trud 4 no.3:3-16 Mr '59.  
(MIRA 12:4)

(Wages)

SUKHAREVSKIY, Boris Mikhaylovich [Sukharevs'kyi, B.M.], kand.ekon.nauk;  
RUBANOVSKIY, P.M. [Rubanovs'kyi, P.M.], otv.red.; LESNAYA, A.A.  
[Liesnaia, A.A.], red.

[Distribution of material goods and cultural welfare at the  
present stage] Rozpodil material'nykh i dukhovnykh blah na  
suchastnomu etapi. Kyiv, 1960. 37 p. (Tovarystvo dlia poshyrennia  
politychnykh i naukovykh znan' Ukrain's'koi RSR, Ser.1, no.35).  
(MIRA 14:4)

(Wage payment systems)

SUKHAREVSKIY, B.

Improving the forms and methods of material incentives.  
Vop. ekon. no.11:13-27 N '62. (MIRA 15:11)  
(Industrial management) (Incentives in industry)

SUKHAREVSKIY, B.

Socialist enterprise and the national economy. Vop. ekon.  
no.5:27-41 My '63. (MIRA 16:6)

(Industrial management)  
(Russia—Economic policy)



DERKACHEV, A.A.; SUKHAREVSKIY, B.P.

Deformation calculation of thin-walled rods for transverse  
load. Trudy Inst. seism. stroi. i seism. 9:5-15 '61.  
(MIRA 15:11-)  
(Elastic rods and wires)

SUKHAREVSKIY, B.P.

Deformation calculation of continuous beams made of thin-walled  
components. Trudy Inst. seism. stroi. i seism. 9:17-70  
'61. (MIRA 15:11)

(Beams and girders, Continuous)

SUKHAREVSKIY, B.P.

Practical method of performing deformation calculations for I-beams.  
Trudy Inst. seism. stroi. i seism. 11:56-72 '62. (MIRA 16:5)  
(Beams and girders) (Deformations (Mechanics))

USSR/Physics-Sintering

FD-1225

Card 1/1      Pub. 153-9/22

Author        : Geguzin, Ya. Ye. and Sukharevskiy, B. Ya.

Title         : Study of sintering of compressed metallic powders under action of manifold pressure

Periodical    : Zhur. tekhn. fiz., 1613-1621, Sep. 1954

Abstract      : Sintering tests were carried out in order to study the effect of additional shrinkage under action of external manifold pressure. The effect of additive external and Laplacian pressures at pressures higher than usual were analyzed. The relation between the "activity" of powders and the additional shrinkage under applied pressure was found to be linear and depend on pressure. The energy of activation of "viscous flow" during sintering of copper powders "active" or deactivated by annealing was evaluated. Nine references including 2 foreign.

Institution   :

Submitted     : July 17, 1953

**"APPROVED FOR RELEASE: 07/13/2001**

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**APPROVED FOR RELEASE: 07/13/2001**

**CIA-RDP86-00513R001653810015-1"**

68619

On the Mechanism of Formation and Decomposition  
of Solid Solutions of Spinel in Periclase

S/020/60/130/05/039/061  
B011/B005

are formed as a consequence of the substitution of magnesium ions by bivalent and trivalent spinel cations. This is confirmed by the authors by comparing the calculated (formula (1)) and experimentally found values of the lattice parameters of these solutions. Table 1 shows that these values lie very close to each other. The placing of the smaller trivalent ions instead of the magnesium ions in the hollow spaces of the octahedron causes a compression of the lattice and, thus, an increase in free lattice energy. The authors also derive rules of solubility in periclase for spinels of complex composition, or spinel mixtures. Solid spinel solutions in periclase are only stable at high temperatures. The solid solution decomposes on cooling. The concentration of the remaining solid solution corresponds to the saturated solution at this lower temperature (Fig 3). Decomposition of the solid solution begins on quenching in water, and is much intensified by quenching in oil. On the basis of the roentgenograms, the authors assume a subsequent decomposition mechanism of solid spinel solutions in periclase: at high  $R^{3+}$  concentrations, the supersaturation and the increase in free energy cause such a shift of ions within the elementary

Card 2/3

S/893/61/000/005/004/005  
B117/B186

AUTHORS: Vishnevskiy, I. I., Sukharevskiy, B. Ya., Gavrish, A. M.  
TITLE: Method of quantitative phase analysis applied to  $ZrO_2$  using  
the diffractometer of type  $\gamma PC-50 \text{ M}$  (URS-50I)  
SOURCE: Kharkov. Ukrayins'kyi naukovodoslidchyi instytut  
vohnetryviv. Sbornik nauchnykh trudov, no. 5(52), 1961,  
315-323

TEXT: A special method of quantitative phase analysis of  $ZrO_2$  was  
developed using the diffractometer, type  $\gamma PC-50 \text{ M}$  (URS-50I) which eliminates  
the background in x-ray pictures. The annular shape of the standard  
specimen makes it possible to keep the illumination of the test specimen  
permanently constant, even if the cross section of the primary beam is  
inhomogeneous. The percentage content of monoclinic and cubic phases is  
determined with the aid of a calibrating curve  $c_x = f(I_x/I_{\text{stand}})$ . It has  
been shown that, irrespectively of the lattice distortion of the specimen

Card 1/2

Method of quantitative phase ...

S/893/61/000/005/004/005  
B117/B186

and its grain size ( $< 60\mu$ ), the amount of the monoclinic modification can be determined from calibration curves for a specimen burnt at  $800^{\circ}\text{C}$  with a grain size of  $< 60\mu$ . Separate calibration curves have to be constructed for determining the cubic modification according to the stabilizing addition used. To determine the phase composition of  $\text{ZrO}_2$  it is, therefore, easier to use the diagram for the monoclinic modification. In the determination of the concentration by the method suggested, the absolute error is 1.2-5%. There are 5 figures and 2 tables.

Card 2/2



29997

S/170/61/004/012/007/011  
B104/B138

Liberation of gases from vacuum-heated ...

rate of  $6^{\circ}/\text{min}$ . As can be seen from Fig. 1, gas liberation peaks appear at  $300-400^{\circ}\text{C}$  and  $700-800^{\circ}\text{C}$ . It is shown that the first maximum is related to desorption of gases, and the ~~second~~ to reduction of oxides. Finally, the quality of the various refractories is estimated from the amount of gases liberated. The specimens were supplied by A. I. Royzen. There are 2 figures, 2 tables, and 3 references: 2 Soviet and 1 non-Soviet.

ASSOCIATION: Institut ogneporov, g. Khar'kov (Institute of Refractory Materials, Khar'kov)

SUBMITTED: February 10, 1961

Fig. 1. Temperature (or time) dependence of infiltration ( $\Delta p$ ,  $\mu/\text{min}$ ).  
Legend to Fig. 1a: (1)  $K_1$ ; (2)  $K_2$ ; (3)  $\text{B}\Gamma$  (VG); (4)  $\text{B}\text{Л}$  (VL); (5)  $\text{A}\text{Л}_1$  ( $\text{AL}_1$ ); (6)  $\text{A}\text{Л}_2$  ( $\text{AL}_2$ ); (7) idle run system (without specimens).

Legend to Fig. 1b: (1) first test; (2) after 2-hours in air; (3) after 50 hr; (4) after 250 hr in air 1 roasting at  $1000^{\circ}\text{C}$ ; (5) idle run.

Card 2/2

SUKHAREVSKIY, B.Ya.; VISHNEVSKIY, I.I.; GAVRISH, A.M.

Disintegration of solid solutions in the  $ZrO - CaO$  system. Dokl.  
AN SSSR 140 no.4:884-887 0 '61. (MIRA 14:9)

1. Predstavleno akademikom N.V.Belovym.  
(Zirconium oxide) (Calcium oxide) (Solutions, Solid)

VISHNEVSKIY, I.I.; GAVRISH, A.M.; SUKHAREVSKIY, B.Ya.

Study of the stabilization and destabilization processes  
of the cubic modification  $ZrO_2$ . Rent. min. syr. no.2:3-4  
'62. (MIRA 16:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.

SUKHAREVSKIY, B.Ya.

Characteristics of solid solutions between chrome spinellid  
and iron oxides. Rent. min. syr. no.2:11-16 '62.

(MIRA 16:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.

S/020/62/147/004/024/027  
B101/B186

# Kinetics of polymorphic ...

$\alpha$ - $\beta$ -transition was found to depend on the preliminary heat treatment of the sample. In the first isothermal experiment, the  $\alpha$ - $\beta$ -transition was completed within 35 min. When repeating the experimental cycle with the same sample, complete conversion could not be reached, even after 3 hrs. Finally, a state of saturation characterized by a certain amount  $\mu(T)$  of inconvertible monoclinic modification was reached. The equation  $(C_t - C_\infty)/(C_0 - C_\infty) = e^{-qt}$ , where  $C_\infty = \mu(T)/(M_\alpha^0 + M_\beta^0)$ , the percentage of monoclinic modification on infinite isothermal heating, is written down for the concentration. Its correctness is proved by the experimental values forming a straight line in the coordinate system  $\log(C_t - C_\infty)$  versus  $t$ . In the first experiment,  $C_\infty$  was found to be 1.5%, in the second one 15%, and in the third one 20%. The assumption that the temperature interval in the  $\alpha$ - $\beta$ -transition of  $ZrO_2$  is due to an internal stress caused by a change in grain size, is consistent with the hypothesis of E.B. Allison and I. Taylor (Trans. Brit. Ceram. Soc., 54, 11, 677 (1955)). Microscopic examinations showed the grains to grow up to ten times their initial size of  $0.1 \mu$  when subjected to the first heating

Card 2/3

ACCESSION NR: AP4041724

substitutes for the  $Mg^{2+}$  ions 0--22 at. %. The results have shown that the presence of cation vacancies leads to a stronger dependence of the thermal resistivity on the concentration than for substitution of cations having the same charge. The results are explained by taking account of the role of the vacancies in the expression for the diameter of scattering of phonons by point defects. The corrected expression describes the thermal resistivity of solid solutions with cation vacancies more correctly than the empirical formula derived by Aliyev and Dzhangirov (FTT v. 5, 3338, 1963). Orig. art. has: 4 figures and 18 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy institut ogneporov, Khar'kov  
(Scientific-Research Institute of Refractories)

SUBMITTED: 28Dec63

ENCL: 02

SUB CODE: SS

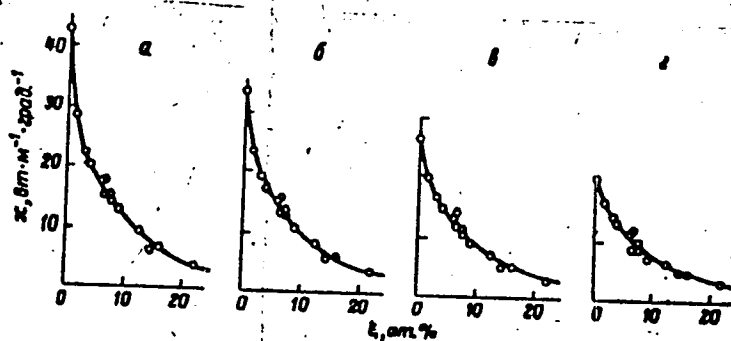
NR REF SOV: 010

OTHER: 008

Card 2/4

ACCESSION NR: AP4041724

ENCLOSURE: 02



Dependence of thermal conductivity of  $\text{MgO-MgFe}_2\text{O}_4$  on the concentration of the substituted  $\text{Mg}^{2+}$  ions at different temperatures ( $^{\circ}\text{K}$ )

a - 300, b - 400, c - 500, d - 600

Card 4/4

SUKHAREVSKIY, B. Ya.; GAVRISH, A. M.

Special features of the polymorphic transformation of cristobalite.  
Dokl. AN SSSR 155 no. 2:438-441 Mr '64. (MIRA 17:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.  
Predstavleno akademikom N. V. Belovym.



SOKHAREVSKIY, B.Ya.; LYSAK, S.V.

Effect of dislocations on the temperature characteristics of  
the polymorphic transformation of cristobalite. Dokl. AN  
SSSR 155 no. 3:615-618 Mr '64. (MIRA 17:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.  
Predstavleno akademikom N.V.Belovym.

SUKHAREVSKIY, B.Ia.; ALAPIN, B.G.; GAVRISH, A.M.

Characteristics of the kinetics of polymorphic transformation  
of zirconium dioxide on cooling. Dokl. AN SSSR 156 no. 3:  
677-680 '64. (MIRA 17:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.  
Predstavleno akademikom N.V.Belovym.

VISHNEVAK Y., I.I.; SUKHAROVSKIY, B.Ye.

Effect of point defects on the heat conduction of substitutional solid  
solutions with various variables. Fiz. tverd. tela, 1978, 20, 1, 16.

(MIRA 17:15)

L. Nauchno-Issledovatel'skiy institut spetsial'nykh, Khar'kov.

VICHNEVSKIY, I.I.; SUKHAREVSKIY, B.Ya.

Role of cationic vacancies in the redox processes taking place  
in ionic crystals. Dokl. AN SSSR 160 no.3:642-645 Ja '65.

(MIRA 18:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut o,neuporov.  
Submitted July 6, 1964.



ACC NO: AP5025790

SOURCE CODE: UR/0363/05/001/007/1067/1544

AUTHOR: Sukharevskiy, B. Ya.; Alapin, B. G.; Gavrish, A. M.

ORG: Ukrainian Scientific Research Institute of Refractorles (Ukrainskiy nauchno-issledovatel'skiy institut ogneporov)

TITLE: Kinetics and mechanism of polymorphous transition of zirconium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1537-1544

TOPIC TAGS: zirconium compound, phase transition, crystal dislocation, crystal defect, physical diffusion, X RAY DIFFRACTION, ACTIVATION ENERGY

ABSTRACT: Certain aspects of the  $\alpha \rightleftharpoons \beta$  transition in zirconium dioxide, involving the change of the monoclinic phase into the cubic phase at about 1100°C are investigated. The experiments involved the use of x ray diffraction at high temperatures by means of a URS-50I apparatus. X-ray diffraction at low temperatures was performed by using an attachment which permitted quenching in liquid nitrogen and the recording of x-ray at nitrogen temperatures. The polymorphous transition of

Card 1/2

UDC: 546.831.4'221 : 541.7

L 14587-66

ACC NR: AP5025790

ZrO<sub>2</sub> was found to be diffusionless and to take place with isothermal kinetics during the  $\alpha \rightarrow \beta$  transition and during the first stage of the  $\beta \rightarrow \alpha$  transition. The main reason for isothermal kinetics, at least in the  $\beta' \rightarrow \alpha$  transition, are structural defects which cause a diffusion of the lines on the x-ray pattern. Mathematical analysis of the dislocation model of the transition shows the existence of limited isothermal kinetics during which the transition rate is determined by the number of defects preventing the motion of the dislocations and by the activation energy required to overcome them by diffusion. The activation energy of the transition measured (approximately 150 kcal/mol) is close to the activation energy of self-diffusion in ZrO<sub>2</sub>. The causes of the increase in the transition range and the decrease in hysteresis following high temperature preliminary annealing of the samples are indicated. Orig. art. has: 6 figures, 15 formulas.

SUB CODE: 11,07/

SUBM DATE: 08Jan65/

ORIG REF: 010/ OTH REF: 013

Card 2/2

1. The Maximum Possible Reinforcement of Sound under Outdoor Conditions, at)

1.1. Introduction

The degree of "sound reinforcement" is defined as  $10 \lg (I_2/I_1)$  where  $I_2$  is the average level of intensity at the point of definition and  $I_1$  is the average level of intensity at the microphone. This quantity is limited by acoustical feedback, and by associated frequency distortion. Very different reinforcement can be achieved, depending on the polar pattern and location of the microphone and the geometry of the boundaries of the sound field. The sound field in a hall is very different from an enclosure. The sound of a speaker, the level of reinforcement is determined by the sound waves reflected from the boundaries of the hall. The reinforcement is determined by the geometry of the hall. The reinforcement of a speaker, sound in the order of the reinforcement of a speaker, can be realized in this way.

1.2. The sound field in a hall, 1961, No. 2, No. 1, 1961, 12-1961



SUKHAREVSKIY, I. V.

Dissertation: "Certain Boundary Problems of Hydrodynamics and the Theory of Elasticity and Its Solution by Means of Integral Equations." Cand Phys-Math Sci, Khar'kov State U, Khar'kov, 1954. (Referativnyy Zhurnal-Mekhanika, Moscow, Aug 54)

SO: SUM 393, 28 Feb 1955

"APPROVED FOR RELEASE: 07/13/2001

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**APPROVED FOR RELEASE: 07/13/2001**

**CIA-RDP86-00513R001653810015-1"**

SUKHAREVSKIY I.V.

THIS AND OTHER INFORMATION RECEIVED FROM THE SOURCE IN THE PAST YEAR HAS  
been of a confidential nature and is being furnished to you for your information only.

SUMMARY

SUBJECT USSE/MATHEMATICS/Integral equations  
 AUTHOR SUCHAREVSKIJ I.V.  
 TITLE On a boundary value problem of hydrodynamics. II.  
 PERIODICAL Dopovidi Akad. Nauk ukrain RSR 1, 39-42 (1955)  
 reviewed 6/1956

CARD 1/2

PG - 84

In the present note the following theorem concerning the determination of a continuous solution of the integral equation

$$(1) \quad u(s) - \frac{1}{\pi} \int u(\sigma) \frac{\partial \ln |\zeta - z|}{\partial n_s} d\sigma = 2 \operatorname{Re} [w_0(z) \cdot z'(s)]$$

is proved which is connected with the boundary value problem of plane hydrodynamics investigated in an earlier paper.-

C is assumed to be a simple piecewise smooth contour  $z=z(s)$  ( $-l_2 \leq s \leq l_1$ ) with the singular point  $z_0=z(0)$  where  $\arg z'(s)$  on each of the intervals  $[-l_2, 0]$ ,  $[0, l_1]$  satisfies the Lipschitz condition with positive exponent  $\alpha$ . With  $C'$  the bow of this contour is denoted on which  $\varepsilon_1 \leq s \leq l_1$ ,  $-\varepsilon_2 \geq s \geq l_2$ , and it is put  $K(\sigma, s) = \frac{1}{\pi} \frac{\partial}{\partial n_s} \ln |\zeta - z|$  ( $\vec{n}$  is the unit vector of the internal

normal). Then it is shown 1) the integral equation 
$$u_\lambda(s) - \lambda \int_C K(\sigma, s) u_\lambda(\sigma) d\sigma = 0$$

*Kharkov Polytech. Inst. im. V.I. Lenin*

SUKHAREVSKIY, I.V.

Certain problems in the theory of the logarithmic potential. Dokl.  
AN SSSR 105 no.3:426-429 N '55. (MLRA 9:3)

1. Khar'kovskiy politekhnicheskii institut imeni V.I. Lenina.  
Predstavleno akademikom V.I. Smirnovym.  
(Integral equations) (Potential, Theory of)

Mat.Sbornik,n.Ser. 38, 167-182 (1956)

CARD 2/4

PG - 470

where  $z \in C'$  and  $f(z)$  is continuous on  $C'$  is solvable uniquely in the class of continuous functions.

If  $f(z)$  is piecewise continuous on  $C$  (with a single possible point of discontinuity of first kind in  $z_0$ ) and the integral equation

$$u(z) - \int_C K(\zeta, z) u(\zeta) d\zeta = f(z)$$

possesses a continuous solution  $u(z)$  which vanishes in the point  $z_0$ , then for  $\varepsilon_1 \rightarrow 0$ ,  $\varepsilon_2 \rightarrow 0$ ,  $u_1(z)$  tends to  $u(z)$ . The limiting process  $u_1^0(z) \rightarrow u(z)$

is uniform on every arc of  $C$  which does not contain the corner. It is assumed

that  $k \geq \frac{\varepsilon_1}{\varepsilon_2} \geq k' > 0$  ( $k, k'$  certain constants).

2. Let

$$u_1(z) = \begin{cases} u_1(z) & \text{if } z \in C' \\ 0 & \text{if } z \in C - C' \end{cases} .$$

AUTHOR: SUKHAREVSKIY, I.V.

20-3-10/59

TITLE: On the  $\lambda$ -Stability of the Solutions of Operator Equations in the Banach Space (O  $\lambda$ -ustoychivosti resheniy operatornykh uravneniy v prostranstve Banakha)

PERIODICAL: Doklady Akademii Nauk<sup>SSSR</sup>, 1958, Vol.118, Nr.3, pp.454-457 (USSR)

ABSTRACT: Let the linear completely continuous operator  $A(\lambda)$  depend analytically (in the sense of the norm convergence) on a complex parameter  $\lambda$  and let it map the Banach space  $E$  into  $E(\lambda) \subset E$ . Let  $F_\lambda \subset E$  consist of elements  $f$  such that the equation  $u - A(\lambda)u = f$  is solvable for fixed  $\lambda$ . Let  $u_\lambda$  be the solution.  
 Definition:  $\lambda_0$  is called a point of stability of  $A(\lambda)$  if for every  $f \in F_{\lambda_0}$  in the sense of the strong convergence there exists  $\lim_{\lambda \rightarrow \lambda_0} u_\lambda = u(\lambda_0)$ . Then  $u(\lambda_0)$  is called  $\lambda$ -stable. Under the assumption that  $A(\lambda)$  in general depends nonlinearly on  $\lambda$ , the author gives two criteria for the stability of the points

Card 1/2



AUTHOR: Sukharevskiy, I.V.

SOV/20-122-5-7/56

TITLE: On the Stability of the Solutions of Integral Equations for a Discontinuous Variation of the Kernel (Ob ustoychivosti resheniy integral'nykh uravneniy pri razryvnom var'irovanii yadra)

PERIODICAL: Izvestiya Akademii nauk SSSR, 1958, Vol 122, Nr 5, pp 774-777 (USSR)

ABSTRACT: Given the Fredholm equation

$$(1) \quad u(x) - \mu \int_0^1 K(x,s)u(s)ds = f(x).$$

Let  $\mu = 1$  be an eigenvalue and  $\varphi_1(x), \dots, \varphi_n(x)$  the corresponding eigenfunctions. Let  $\psi_1(x), \dots, \psi_n(x)$  be the eigenfunctions of

$K(s,x)$  and let  $\int_0^1 f(x)\psi_j(x)dx = 0$ ,  $j=1,2,\dots,n$ . In (1) let  $\mu=1$  and the interval  $(0,1)$  is replaced by  $(\lambda,1)$ ,  $0 < \lambda < 1$ . Then these arises the question whether the appearing integral equation

$$(2) \quad u_\lambda(x) - \int_\lambda^1 K(x,s)u_\lambda(s)ds = f(x)$$

Card 1/3 becomes uniquely solvable for every sufficiently small  $\lambda$ .

On the Stability of the Solutions of Integral Equations  
for a Discontinuous Variation of the Kernel

SOV/20-122-5-7/56

Theorem. If the systems  $\{\varphi_i\}_1^n$  and  $\{\psi_i\}_1^n$  in  $[0, \lambda]$  admit a biorthogonalization for all sufficiently small  $\lambda$ , then (2) is uniquely solvable. That occurs especially if the functions  $\varphi_i$  and  $\psi_i$  are  $(n-1)$ -times continuously differentiable and the Wronskiy-determinants are  $W(0, \varphi_1, \dots, \varphi_n) \neq 0$ ,  $W(0, \psi_1, \dots, \psi_n) \neq 0$ .

Theorem: Let  $f(x)$  be  $(n-1)$ -times continuously differentiable, let the derivatives  $\frac{\partial^j k}{\partial x^j}$  and  $\frac{\partial^j k}{\partial s^j}$  ( $j=1, 2, \dots, n-1$ ) be continuous or polar with respect to  $(x, s)$ . Let  $W(0, \varphi) \neq 0$ ,  $W(0, \psi) \neq 0$ . Then for  $\lambda \rightarrow 0$  the solution  $u_\lambda(x)$  of (2) has a limit value  $u_0(x)$  being the solution  $u_\lambda(x)$  of (2) has a limit  $u_0(x)$  EM such that

$$u_0(0) = u'_0(0) = \dots = u_0^{(n-1)}(0) = 0.$$

Card 2/3

On the Stability of the Solutions of Integral Equations      SOV/20-122-5-7/56  
for a Discontinuous Variation of the Kernel

Two further theorems contain generalizations and specializations.  
There is 1 Soviet reference.

ASSOCIATION: Khar'kovskiy politekhnicheskii institut imeni V.I.Lenina  
(Khar'kov Polytechnical Institute imeni V.I.Lenin)

PRESENTED: May 30, 1958, by V.I.Smirnov, Academician

SUBMITTED: May 28, 1958

Card 3/3

AUTHORS: Povzner, A.Ya. and Sukharevskiy, I.V. SOV/20-122-6-8/49  
 TITLE: On the Discontinuity of the Green Function of the Mixed Problem for the Wave Equation and on Some Diffraction Problems (O razryvakh funktsii Grina smeshannoy zadachi dlya volnovogo uravneniya i o nekotorykh difraktsionnykh zadachakh)  
 PERIODICAL: Doklady Akademii nauk, SSSR, 1958, Vol 122, Nr 6, pp986-989 (USSR)  
 ABSTRACT: The solution  $u(t, x)$  of the problem

$$\Delta u = u_{tt}$$

$$u(0, x) = 0, \quad u_t(0, x) = f(x), \quad u|_S = 0,$$

where  $S$  is the simple infinitely differentiable boundary of a two-dimensional domain  $D$ , can be written in the form

$$u(t, x) = u_0(t, x) + \int_D w(t, x, y) f(y) d\omega_y,$$

if  $u_0(t, x)$  is the solution of Cauchy's problem in the whole space under the same initial conditions. The authors investigate the points of discontinuity  $t = t_k(x, y)$  of the Green

Card 1/3

32487

S/044/61/000/0-1/004/049  
C111/C444

1473000

AUTHOR: Sukharevskiy, I. V.

TITLE: On the solvability of some boundary value problems in a domain with non-regular boundary

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1961, 3-4  
abstract 11B55 (Tr. Khar'kovsk. politekhn. in-ta, 1959  
25, 23 - 36)

TEXT: Let  $B^+$  be an  $(n+1)$ -fold connected finite domain which is bounded by the piecewise Lyapunov curves  $L_0, L_1, \dots, L_n$ ; admitted is a finite number of salient points, between which the derivative  $t'(s)$   $t = t(s)$ , being the equation of the boundary, satisfies the Holder condition

Considered is a special case of the Hilbert boundary value problem

$\operatorname{Re}\{ia(t) - ib(t)\} = f(t)$ ,  
where  $a(t) - ib(t) = t(s)$ . The function  $f(t)$  satisfies the Holder condition everywhere except for the salient points; in the salient points it may possess discontinuities of first kind. The curve  $L_0$  enclosing the domain can be absent; in this case the domain turns into

Card 1/2

[Abstracter's note: Complete translation]

Card 2/2

24(3)

AUTHORS: Povzner, A. Ya., Sukharevskiy, I. V. SOV/20-127-2-16/70

TITLE: The Integral Equations of the Second Kind for the Problems of Diffraction on an Infinitely Thin Screen

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 2, pp 291-294 (USSR)

ABSTRACT: The present work was undertaken with the object of developing the boundary value problem of the diffraction into an equivalent regular integral equation of the second kind. In the first part of the paper the differential-integral equation of the first kind (7) is developed with Green's formulas in the familiar manner, and then the principal problem of this paper is treated: the transformation of equation (7) into an integral equation of the second kind. Equation (8) is obtained from (7) with the use of an operator, and equation (9) is then developed from (7) and (8). By a corresponding transformation Fredholm's equation (10) is derived from equation (9). The general formula is given for the special case of the infinitely thin plane screen, and it is stated that the integral equation (10) is equivalent to the

Card 1/2

The Integral Equations of the Second Kind for the  
Problems of Diffraction on an Infinitely Thin Screen

SOV/20-127-2-16/70

above boundary value problem. In the last part a scalar investigation of the diffraction is carried out, giving solutions of Dirichlet and Neumann. There are 4 references, 1 of which is Soviet.

ASSOCIATION: Institut radiofiziki i elektroniki Akademii nauk USSR  
(Institute of Radiophysics and Electronics of the Academy of Sciences, UkrSSR)  
Khar'kovskiy politekhnicheskii institut im. V. I. Lenina  
(Khar'kov Polytechnic Institute imeni V. I. Lenin)

PRESENTED: March 28, 1959, by V. I. Smirnov, Academician

SUBMITTED: March 26, 1959

Card 2/2

9,3700(1057,1163,1462)

30588  
S/044/62/000/001/040/061  
C111/C222

AUTHORS: Povzner, A. Ya., Sukharevskiy, I. V.  
TITLE: On the determination of the asymptotics of solutions of diffraction problems for short waves  
PERIODICAL: Referativnyy zhurnal, Matematika, no. 1, 1962, 59-60, abstract B287, ("Zh. vychisl. matem. i matem. fiz.", 1961, 1, no. 2, 224-245)  
TEXT: The asymptotics of the solution when  $k \rightarrow \infty$  is determined for the problem

$$\Delta u + k^2 u = 0; \quad \frac{\partial u}{\partial n} \Big|_S = - \frac{\partial u_0}{\partial n} \Big|_S; \quad u_0 = \frac{1}{2\pi} \frac{e^{ik|x-a|}}{|x-a|}; \quad (1)$$

$$x = (x_1, x_2, x_3); \quad a = (a_1, a_2, a_3); \quad x, a \in D.$$

Here D is such an infinite domain that its boundary S is completely "illuminated" by a source at the point a. For example, D can be the interior of an elliptical paraboloid. In this case U is the reflected



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FCS(k)/EWT(1)/EEC-2/EDD-2/BDS--ASD/ESD-3/APGC--Pi-4/Fj-4/

ACCESSION NR: AP3000557

S/G109/63/003/005/0765/0771 12

AUTHOR: Gukasov, Yu. G; Sukharevskiy, I. V.

TITLE: Asymptotic of short-wave radiation by a dielectric-coated mirror antenna 25B

SOURCE: Radiotekhnika i elektronika, v. 8, no. 5, 1963, 765-771

TOPIC TAGS: centimeter waves, antenna coating

ABSTRACT: Thin layers of dielectric play an important role in problems of sleet or paint, effects on antenna operation, phase correction by means of dielectric costs, etc. Assuming the coat thickness and the wave number to be of the same order of magnitude, zero-approximation asymptotic formulae are developed covering the general case of the mirror shape, coat shape, and source place. As an example, two terms of the asymptotic expansion are deduced for a layer limited by two cofocal parabolas (parabolic antenna). The results are numerically evaluated and experimentally verified (Enclosure, figs 4 and 5) for 1.7-8.5-mm dielectric thickness and 3.2-cm wavelength. Orig. art. has: 24 equations and 5 figures.

ASSOCIATION: none

SUBMITTED: 25Dec61

DATE ACQD: 30May63

ENCL: 01

SUB CODE: CO

NO REF SOV: 001

OTHER: 002

Card 1/2/

21(7)  
AUTHOR:

Sukharevskiy, V. G.

SOV/56-36-1-9/62

TITLE:

Investigation of Stripping Reactions of the Type (d,p) in Silicon Isotopes (Issledovaniye reaktsiy sryva tipa (d,p) na izotopakh kremniya)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 1, pp 52-59 (USSR)

ABSTRACT:

In the introduction some investigations carried out by other authors are mentioned and the results obtained are discussed in short. For deuteron energies of 4.3 Mev stripping reactions of the type (d,p) have already been investigated by the author of the present paper (Ref 5) in  $Si^{29}$  and  $Si^{30}$ -preparations. The investigations forming the subject of the present report were also carried out with 4.3 Mev protons. Particle acceleration was carried out with the 72 cm cyclotron of the MIYAF MGU (Scientific Research Institut for Nuclear Physics of Moscow State University). The deuteron beam was electro-magnetically focused and impinged through a system of collimator gaps at an angle of  $15^\circ$  on to the target located in the center of a cylindrical chamber. The protons emitted by the target were measured by means of emulsion plates of the type

Card 1/4

Investigation of Stripping Reactions of the Type (d,p) SOV/56-36-1-9/62  
in Silicon Isotopes

$\text{Si}^{30}(\text{d,p})\text{Si}^{31}$ : The results obtained by investigations are shown partly by figure 3 and partly by figure 4 (angular distribution in the case of different excitations), and by figure 5.

$\text{Si}^{28}(\text{d,p})\text{Si}^{29}$ : Figure 4 shows the angular distribution measured for various states.

The results of all investigations are shown in table 2. The orbital angular momenta and the absolute values of the differential reaction cross sections were investigated. The angular distributions obtained are compared with the theoretical values obtained by Butler and Bhatia (Butler, Bkhatia) (Refs 1,2); the spins and parities of the ground- and the first excited states of  $\text{Si}^{31}$  confirm the calculations carried out by Goldhammer (Goldkhamner)(Ref 17). In conclusion, the author thanks S. S. Vasil'yev for supervising work, and he further express his gratitude to the cyclotron team of the

Card 3/4

21(7)

AUTHOR:

Sukharevskiy, V. G.

SOV/56-36-5-10/76

TITLE:

The Angular Distributions in the Reactions  
 $\text{Ne}^{22}(\text{d},\text{p})\text{Ne}^{23}$  and  $\text{Ar}^{36}(\text{d},\text{p})\text{Ar}^{37}$  (Uglovyye  
 raspredeleniya v reaktsiyakh  $\text{Ne}^{22}(\text{d},\text{p})\text{Ne}^{23}$  i  $\text{Ar}^{36}(\text{d},\text{p})\text{Ar}^{37}$ )

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,  
 Vol 36, Nr 5, pp 1377-1380 (USSR)

ABSTRACT:

The author of the present paper speaks about investigations of (d,p) stripping reactions on gas targets which were enriched with the isotopes  $\text{Ne}^{22}$  (enrichment 90 %) and also (with 11 % enrichment) with  $\text{Ar}^{36}$  isotopes. In the case of the first reaction mentioned in the title (1) angular distribution has already been investigated several times, in the case of the second (2) this investigation was carried out for the first time by the author. First, the experimental method and the device used are described. Figure 1 is a schematical representation of the experimental arrangement. Deuteron acceleration (to 4 Mev) was carried

Card 1/4

The Angular Distributions in the Reactions  
 $\text{Ne}^{22}(\text{d},\text{p})\text{Ne}^{23}$  and  $\text{Ar}^{36}(\text{d},\text{p})\text{Ar}^{37}$

SOV/56-36-5-10/76

out on the cyclotron of the NIIYaF MGU (Scientific Research Institute for Nuclear Physics of Moscow State University). Results: Reaction (1): Figure 1 shows the measured energy spectrum of (d,p) reactions on  $\text{Ne}^{22}$  and  $\text{Ne}^{20}$  under  $\theta_{\text{lab}} = 58^{\circ}30'$ , and figure 3 shows the experimental angular distributions together with the theoretical curves, calculated according to Butler's formula. With a radius of  $6.1 \cdot 10^{-13}$  cm in the ground state and  $6.5 \cdot 10^{-13}$  cm in the first excited state one obtained for spin and parity of  $\text{Ne}^{23}$  in the ground state  $(5/2)^+$  or  $(3/2)^+$  and  $(1/2)^+$  in the first excited state. For the differential cross sections of transitions into the ground- and first excited state respectively of  $\text{Ne}^{23}$  in the maxima of angular distribution,  $1.87 (38^{\circ})$  and  $11.1 (0^{\circ})$  mb/steradian was found, where  $\theta_{\text{lab}}^2 = 0.22 \cdot 10^{-2}$

Card 2/4

The Angular Distributions in the Reactions

SOV/56-36-5-10/76

$\text{Ne}^{22}(\text{d},\text{p})\text{Ne}^{23}$  and  $\text{Ar}^{36}(\text{d},\text{p})\text{Ar}^{37}$

and  $\theta_{\text{lab}}^2 = 0.16 \cdot 10^{-2}$ . In the shell model  $\text{Ne}^{23}$  in the ground state with  $T = 3/2$  has the configuration  $(1d_{5/2})^{-1}$  which corresponds to a hole in the filled neutron subshell  $1d_{5/2}$ , and the first excited state has the configuration (0.98 Mev level):  $(2s_{1/2})^{-1}$ . Reaction (2): Figure 4 shows the proton spectra on  $\text{Ar}^{36}$ ,  $\text{C}^{13}$  and  $\text{N}^{14}$  at an angle of  $\theta_{\text{lab}} = 32^\circ 30'$  (the two latter isotopes were in the target as impurities), figure 5 shows the angular distribution corresponding to transitions into the ground state of  $\text{Ar}^{37}$ ; the theoretical curve, which is also plotted, was calculated according to Butler's formula as  $R = 6.7 \cdot 10^{-13} \text{ cm}$ . The cross section could not be calculated because there was an indeterminable quantity of air in the target. For spin and parity in the ground state  $(3/2)^+$  or  $(5/2)^+$  was

Card 3/4

SUKHACHEVSKIY, V. G. Cand Phys-Math Sci -- (diss) "Investigation  
of the Reactions of Disruption (d,p) on Enriched Isotopes Si-29,  
Si-30, Ne-22, and A-36," Leningrad, 1960, 9 pp, 150 copies (Leningrad  
State U. im A. A. Zhdanov) (KL, 46/60, 123)

SUKHAREVSKIY, V.G.

Collective properties of  $\text{Si}^{30}$ ,  $\text{Si}^{31}$ , and  $\text{Ne}^{23}$ , and reduced widths  
in stripping reactions. Zhur. eksp. i teor. fiz. 38 no.1:219-221  
Jan '60. (MIRA 14:9)

1. Instituta yadernoy fiziki Moskovskogo gosudarstvennogo univer-  
siteta.

(Silicon--Isotopes) (Neon--Isotopes) (Nuclear reactions)



31780

S/056/61/041/006/027/054  
B102/B138

24.6600

AUTHORS: Sukharevskiy, V. G., Teplov, I. B.

TITLE: Coulomb and nuclear interaction in deuteron stripping reactions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41,  
no. 6(12), 1961, 1842-1844

TEXT: The differential cross sections of the reaction  $\text{Si}^{30}(\text{d}, \text{p})\text{Si}^{31}$ , induced by 4.25 Mev deuterons was calculated. Coulomb and nuclear interaction was taken into account. Calculations were carried out for formation of the  $\text{Si}^{31}$  nucleus in the ground state ( $l_n = 2, Q = 4.36$  Mev) and for its formation in the first excited state ( $l_n = 0, Q = 3.61$  Mev). The maximum orbital momenta of deuteron and proton were taken to be 6 and 8, respectively. The angular distributions were calculated for three cases: 1) Coulomb and nuclear interactions neglected; distribution agrees with Butler's ( $R = 6.5 \cdot 10^{-13}$  cm). 2) Allowing only for Coulomb interaction. 3) Allowing for both for the rigid-sphere model with  $5.5 \cdot 10^{-13}$  cm radius and

Card 1/3

Coulomb and nuclear interaction in ...

31780  
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B102/B138

deuteron scattering from the sphere with  $R=6.5 \cdot 10^{-13}$  cm. For the ground state the Coulomb interaction causes the main peak to shift  $\sim 15^\circ$  to larger angles; in Born's approximation it is at  $45^\circ$ . Nuclear interaction shifts the peak  $20^\circ$  in the other direction. The angular distributions are slightly different from the Butler shape at small angles and have non-vanishing cross sections in the minima. Coulomb and nuclear corrections reduce the cross section values by a factor  $N$ :  $\sigma(\chi) = N\sigma_0(\chi)$ ,  $\sigma_0(\chi)$  is the differential cross section according to Butler. For deuteron energies of 4.25 Mev in the laboratory system and  $E_d/B = 1.1$  in the c. m. s. (B - nuclear Coulomb barrier), the following corrections were calculated: For  $l = 0$ ,  $N_{\text{Coul.}} = 0.27$  and  $N_{\text{Coul.}+\text{nucl.}} = 0.008$ . For  $l = 2$ ,  $N_{\text{Coul.}} = 0.03$  and  $N_{\text{Coul.}+\text{nucl.}} = 0.004$ . In no case is the  $N_{l=0}/N_{l=2}$  ratio far from unity. This means that the Butler theory can be used to calculate reduced-width ratio for final-state analyses. There are 1 figure, 1 table, and 3 references: 2 Soviet and 1 non-Soviet. The reference to the English-

Card 2/3

SUKHAREVSKIY, V.M., kand.tekhn. nauk.

Remote extinguishing of underground fires with foam. Bezop.  
truda v prom. 2 no.1:26 Ja '58. (MIRA 11:1)  
(Fire extinction--Chemical systems)

SUKHAREVSKIY, V.M.; KHOROL'SKIY, V.T.; ZHADAN, V.M.; NIKOLAYEV, V.F.,  
otv.red.; VINOGRADOVA, G.V., red.izd-va; SHKLYAR, S.Ya., tekhn.  
red.

[Fire prevention in mines] Protivopozharnaya zashchita shakht.  
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95 p. (MIRA 13:3)

1. Tsentral'naya nauchno-issledovatel'skaya laboratoriya po gorno-  
spasatel'nomu delu.  
(Coal mines and mining--Fires and fire prevention)

ABRAMOV, F.A., prof., doktor tekhn.nauk; BALTAYTIS, V.Ya., inzh.;  
BARON, L.I., doktor tekhn.nauk; BATALIN, S.A., dotsent, kand.  
tekhn.nauk; BYKOV, L.N., prof., doktor tekhn.nauk; VESELOVSKIY,  
V.S., prof., doktor tekhn.nauk; VLADIMIRSKIY, V.V., kand.tekhn.  
nauk [deceased]; VORONIN, V.N., doktor tekhn.nauk [deceased];  
VORONINA, L.D., kand.tekhn.nauk; VOROPAYEV, A.F., prof.,doks.tekhn.  
nauk; ZHUKOV, G.I.; KOMAROV, V.B., prof., doktor tekhn.nauk;  
KRICHEVSKIY, R.M., kand.tekhn.nauk; KSENOFONTOVA, A.I., dotsent,  
kand.tekhn.nauk; LIDIN, G.D., doktor tekhn.nauk; MILETICH, A.F.,  
dotsent, kand.tekhn.nauk; MUSTEL', P.I., dotsent, kand.tekhn.  
nauk; NOVIKOV, K.P., kand.tekhn.nauk; OGIYEVSKIY, V.M., prof.,  
doktor tekhn.nauk [deceased]; POLESIN, Ya.L., inzh.; RIPP, M.G.,  
dotsent, kand.tekhn.nauk; SOBOLEV, G.G., inzh.; SOLOV'YEV, P.M.,  
inzh.; SUKHAREVSKIY, V.M., kand.tekhn.nauk; KHEYFITS, S.Ya.,dotsent,  
(Continued on next card)

ABRAMOV, P.A.---(continued) Card 2.

kand.tekhn.nauk; KHODOT, V.V., kand.tekhn.nauk; SHCHERBAN',  
A.N.; TERPIGOREV, A.M., glavnyy red.; SKOCHINSKIY, A.A., otv.  
red.toma; ZAYTSEV, A.P., zam. otv.red.toma; BOBROV, I.V., red.  
toma; KOMAROV, V.B., red.toma; SIRYACHENKO, P.N., red.toma;  
VARZIN, A.V., kand.tekhn.nauk, red.toma; KLIMANOV, A.D., dots.,kand.  
tekhn.nauk, red.toma; KRIVONOGOV, K.K., inzh., red.toma; NEUTMIN,  
I.N., inzh., red.toma; TITOV, N.G., doktor tekhn.nauk, red.toma;  
CHIZHOV, B.D., kand.tekhn.nauk, red.toma; GNEDIN, V.Ye., red.  
izd-va; NIKOLAYEV, V.F., red.izd-va; BASHEVA, T.A., red.izd-va;  
PROZOROVSKAYA, V.L., tekhn.red.

[Mining; an encyclopedic dictionary] Gornoe delo; entsiklope-  
dicheskiy spravochnik. Glav.red. A.M.Terpigorev. Chleny glav.  
red.: A.I.Barabanov i dr. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry  
po ugol'noi promyshl. Vol.6. [Mine atmosphere and ventilation;  
controlling dust, gases, and fires; mine rescue work] Rudnichnaya  
atmosfera i ventiliatsiya; Bor'ba s pyl'yu, gazami i požarami;  
Gornospasatel'noe delo. Redkollegiya toma: A.A.Skochinskiy i dr.  
1959. 375 p. (MIRA 12:6)

1. Chlen-korrespondent AN USSR (for Shcherban').  
(Mine ventilation) (Mine rescue work)

SUKHAREVSKIY, V.M., kand.tekhn.nauk; KHAYESH, M.M., inzh.

Underground fires caused by d.c.electric currents and the prevention of these fires. Bezop.truda v prom. 4 no.1:9-11  
Ja '60. (MIRA 13:5)  
(Coal mines and mining--Fires and fire prevention)

SUKHAREVSKIY, V.N.; BRAYNIN, M.I.

Modeling the spraying and transportation of liquid in mines. Sbor.  
trud.Inst.gor.dela AN URSR no.8:138-147 '61. (MIRA 15:2)  
(Coal mines and mining—Fires and fire prevention)  
(Atomization)



L 16734-63 EPR/EPA/EPF(c)/EWT(1)/EWT(m)/EPF(n)-2/BDS AEDC/AFFTC/ASD/APGC/  
 SSD Paa-4/Fs-4/Pr-4/Fu-4 BW/WW/JW/JWD/H S/124/63/000/004/021/064

83

AUTHOR: Sukharevskiy, V. M.

TITLE: Determination of temperature before a combustion front

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1963, 93, abstract 4B649  
 (Sb. tr. In-ta gorn. dela. AN USSR, no. 10, 1962, 74-80)

TEXT: A study is made of the temperature field before the combustion front in a pipe with circular cross-section. In the study it is assumed that the air moving along the pipe is heated on account of the stationary process of convective heat exchange from the pipe wall, which in turn is heated by radiation from the flame front. A computation is made of the radiant heat exchange between the flame front and the pipe wall. Also the differential equation for heat exchange from the heated wall to the air is derived and solved. The results of this computation enable us to assume that the basic receiver of radiant heat from the flame front is the pipe wall, while the air before the flame front is only slightly heated. The heated portion of the pipe has a temperature close to that of the flame itself, while the air is heated both as the result of convective heat exchange and as the result of displacement of the products of the combustion. Yu. N. Denisov

[Abstracter's note: Complete translation.]

Card 1/1

SUKHAREVSKIY, V. M., kand. tekhn. nauk; SHEIN, L. M., inzh.; VASILENKO,  
V. P., inzh.; DRANITSYN, Ye. S., inzh.; STARUSHCHENKO, A. S.,  
nauchnyy sotrudnik

Role of wetting and the moisture regime of coal in the massif.  
Ugol' Ukr. 7 no.4:42-43 Ap '63. (MIRA 16:4)

1. Institut gornogo dela AN UkrSSR (for Sukharevskiy, Shein,  
Vasilenko, Dranitsyn).

(Coal mines and mining)  
(Mine dusts—Prevention)

SUKHAREVSKIY, V.M.; SARACHUK, V.I.; BRAYNIN, M.I.

Investigating the transportation of absorbed liquid by a ventilating current. Sher. trad. Inst. gor. dela AN URSS no.138  
113-133 '63 (MIRA 1781)

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"Sound Energy Density in an Enclosure Excited by Directional Source,"  
Dokl. AN SSSR, 25, No.1, 1939

SUKHAREVSKIY, Yu. M.

"On the Theory of Acoustic Feedback in Sound Reinforcing Systems," Dokl.  
AN SSSR, 26, No.5, 1940

SUKHAREVSKIY, Yu. M.

"On Experimental Investigation of Acoustic Feedback in a Closed Room,"  
Dokl. AN SSSR, 26, No.7, 1940.

SUKHAREVSKIY, Yu. M.

"On the Maximum Possible Reinforcing of Sound Under Outdoor Conditions,"  
Dokl. AN SSSR, 26, No.9, 1940

SHCHERBOVICH, YU. N.

USSR/ Acad Sci

Nov/Dec 1947

"Regular Session of Department of Physicomathematical Sciences of  
the Academy of Sciences, USSR"  $\frac{1}{2}$  p

"Izv Akad Nauk SSSR, Ser Fiz" Vol XI, No 6

Papers submitted at the May session by: M. F. Subbotin, G. A. Shaya,  
I. V. Obreimov, A. R. Prikhod'ko, I. V. Rodnikova, A. S. Zavel'skiy,  
S. Kh. Matushevskiy, M. M. Reyfman, Yu. M. Sukharevskiy, and V. S. Nesterov.  
Papers submitted at the Jun session by: A. N. Kolmogorov, V. A. Arkad'yev,  
and A. V. Shubnikov.

PA 57T15



SUKHAREVSKIY, YU. M.

52194

PA 52194

USSR/Physics  
Sound, Underwater - Scattering  
Sound, Underwater - Absorption

Oct 1947

"Reverberation of the Sea in Directed Radiation  
and the Reception of Sound," Yu. M. Sukharevskiy,  
Phys Inst Imeni Lebedev, Acad Sci USSR, 4 pp

"Dokl Akad Nauk SSSR" Vol LVIII, No 1

The dispersion of the direction of radiation and  
reception, influencing the strength of reverbera-  
tion, does not influence the speed of diminution of  
the reverberation. This results from the fact that  
the coefficients, calculating the effect of the  
direction, enter as a constant factor, not depending  
52194

USSR/Physics (Contd)

Oct 1947

upon time, into the expressions for the strength  
of reverberation in a given moment of time. Sub-  
mitted by Academician S. I. Vavilov.

USSR/Physics

Oct 1947

Sound - Absorption

Sea Water - Acoustic Properties

"Reverberation of the Sea in the Presence of Sound Absorption," Yu. M. Sukharevskiy, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 2

In previous works, author discussed reverberation of the sea during the absence of sound damping by distribution of absorption. In this article, author gives formulas and reasons for establishing formulas to calculate reverberation of the sea when sound is absorbed. Submitted by Academician S. I. Vavilov, 27 Mar 1947.

49r88

STERN, Vol. 11.

38791

USSR/Oceanography  
Waves, Ultrasonic

Nov 1947

"Character of Fluctuating Reverberation of Sea," Yu. M. Sukharevskiy, Physics Institute imeni P. N. Lebedev, Academy of Sciences of the USSR, 34 pp

"Dok Ak Nauk" Vol LVIII, No 5

Author discusses previous experiments which were conducted on reverberation set up in sea after super-sonic impulse is introduced. Various conditions necessary for study of reverberation were not fully explained in first series of experiments. Author here explains fluctuating reverberation of sea and discusses some considerations on character of fluctuating reverberations. Submitted by Academician S. I. Vavilov, 22 Aug 1947.

38791

SUKHAREVSKIY, YU. M.

PA76T92

USSR/Oceanology  
Waves, Ocean  
Reverberation

Jun 1948

"Some Features of the Observed Reverberation of the Sea," Yu. M. Sukharevskiy, Phys Inst imeni P. M. Lebedev, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LX, No 7

Discusses diffusion in surface of sea as source of reverberation, principles of intensity of reverberation relative to time, and other phenomena observed in experiments. Submitted Mar 1948.

76T92